CLAIMS

We claim:

1. A hair grooming composition comprising:

(1) about 0.5 to 10 weight percent of a partially or totally neutralized carboxyalkyl cellulose ester; and

(2) about 85 to 99.5 weight percent of a liquid vehicle comprising about 0 to 96 weight percent water and about 4 to 100 weight percent of an alkanol having 2 or 3 carbon atoms;

wherein

the carboxyalkyl cellulose ester of component (1) is a $C_2 - C_4$ alkanoate ester of carboxy($C_1 - C_3$-alkyl)cellulose having an inherent viscosity of about 0.2 to 0.7 dL/g as measured in a 60/40 by weight solution of phenol/tetrachloroethane at 25°C, a degree of substitution per anhydroglucose unit of carboxy($C_1 - C_3$-alkyl) of greater than 0.2 to about 0.75, and a degree of substitution per anhydroglucose unit of $C_2 - C_4$ alkanoate estert residue of about 1.5 to 2.7; and

about 40 to 90 mole percent of the carboxy groups of the carboxyalkyl cellulose ester of component (1) are neutralized with a base.

2. A hair grooming composition according to Claim 1 wherein the $C_2 - C_4$ alkanoate ester of carboxy($C_1 - C_3$-alkyl) cellulose component is a carboxymethyl cellulose acetate butyrate having a degree of substitution of carboxymethyl of 0.2 to 0.75, preferably 0.25 to 0.35, a degree of substitution per anhydroglucose unit of hydroxyl from about 0.1 to 0.9, and a degree of substitution per anhydroglucose unit of butyryl of about 0.1 to 2.6 and a degree of substitution per anhydroglucose unit of acetyl of 0.1 to 1.65, and having an inherent viscosity of 0.2 to 0.7 dL/g, as measured in a 60/40 by weight solution of phenol/tetrachloroethane at 25°C; and about 40 to 90 mole percent of the carboxy groups of the carboxymethyl cellulose acetate butyrate are neutralized with an amine base.

3. A hair grooming composition according to Claim 2 wherein the carboxymethyl cellulose acetate butyrate has an inherent viscosity of 0.30 to 0.60 dL/g, a degree of substitution per anhydroglucose unit of hydroxyl of 0.10 to 0.90, a degree of substitution per anhydroglucose unit of butyryl of 1.1 to 2.55, and a degree of substitution per anhydroglucose unit of acetyl is 0.1 to 0.9; the liquid vehicle comprises about 20 to 90 weight percent water and about 10 to 80 weight percent of an alkanol having 2 or 3 carbon atoms; and about 50 to 80 mole percent of the carboxy groups of the carboxymethyl cellulose acetate butyrate are neutralized with an alkanolamine base having a molecular weight of 45 to 200.

4. A hair grooming composition according to Claim 1 wherein the $C_2 - C_4$ alkanoate ester of carboxy($C_1 - C_3$-alkyl) cellulose component is a carboxymethyl cellulose acetate propionate having a degree of substitution of carboxymethyl of 0.2 to 0.75, preferably 0.25 to 0.35, a degree of substitution per anhydroglucose unit of hydroxyl from about 0.1 to 0.7, and a degree of substitution per anhydroglucose unit of propionyl of about 0.1 to 2.6 and a degree of substitution per anhydroglucose unit of acetyl of 0.1 to 1.65, and having an inherent viscosity of 0.2 to 0.7 dL/g, as measured in a 60/40 by weight solution of phenol/tetrachloroethane at 25°C; and about 40 to 90 mole percent of the carboxy groups of the carboxymethyl cellulose acetate propionate are neutralized with an amine base.

5. A hair grooming composition according to Claim 2 wherein the carboxymethyl cellulose acetate propionate has an inherent viscosity of 0.30 to 0.60 dL/g, a degree of substitution per anhydroglucose unit of hydroxyl of 0.10 to 0.70, a degree of substitution per anhydroglucose unit of propionyl of 1.1 to 2.55, and a degree of substitution per anhydroglucose unit of acetyl is 0.1 to 0.9; the liquid vehicle comprises about 20 to 90

weight percent water and about 10 to 80 weight percent of an alkanol having 2 or 3 carbon atoms; and about 50 to 80 mole percent of the carboxy groups of the carboxymethyl cellulose acetate propionate are neutralized with an alkanolamine base having a molecular weight of 45 to 200.

6. A hair grooming composition comprising:

I. about 0.5 to 10 weight percent of a partially or totally neutralized carboxyalkyl cellulose ester;

II. about 0.5 to 10 weight percent of a sulfonate-containing, linear polyester; and

III. about 85 to 99 weight percent of a liquid vehicle comprising about 0 to 96 weight percent water and about 4 to 100 weight percent of an alkanol having 2 or 3 carbon atoms;

wherein

the carboxyalkyl cellulose ester of component (1) is a $C_2 - C_4$ alkanoate ester of carboxy($C_1 - C_3$-alkyl)cellulose having an inherent viscosity of about 0.2 to 0.7 dL/g as measured in a 60/40 by weight solution of phenol/tetrachloroethane at 25°C, a degree of substitution per anhydroglucose unit of carboxy($C_1 - C_3$-alkyl) of greater than 0.2 to about 0.75, and a degree of substitution per anhydroglucose unit of $C_2 - C_4$ alkanoate estert residue of about 1.5 to 2.7;

about 40 to 90 mole percent of the carboxy groups of the carboxyalkyl cellulose ester of component (1) are neutralized with a base; and the sulfonate-containing, linear polyester is comprised of:

(i) diacid monomer residues comprising residues of at least one dicarboxylic acid;

(ii) about 4 to 26 mole percent, based on the total of all acid, hydroxy and amino equivalents, of monomer residues of at least one difunctional sulfo monomer containing at least one sulfonate group bonded to an

aromatic ring where the functional groups are hydroxy, carboxy or amino; and

(iii) monomer residues of at least one diol or a mixture of a diol and diamine comprising:

(a) at least 15 mole percent, based on the total mole percent of diol monomer residues or diol and diamine monomer residues, of a diol having the formula $-(OCH_2CH_2)_n-$ wherein n is 2 to about 10; or

(b) about 0.1 to less than about 15 mole percent, based on the total mole percent of diol monomer residues or diol and diamine monomer residues, of monomer residues of a poly(ethylene glycol) having the formula $-(OCH_2CH_2)_n-$ wherein n is 2 to about 500, provided that the mole percent of such residues is inversely proportional to the value of n; and, optionally

(iv) monomer residues of at least one difunctional monomer reactant selected from hydroxycarboxylic acids, aminocarboxylic acids and aminoalkanols;

provided that at least 20% of the groups linking the monomeric units are ester, i.e., carbonyloxy linkages.

7. A hair grooming composition according to Claim 6 wherein the C_2 – C_4 alkanoate ester of carboxy(C_1 – C_3-alkyl) cellulose component is a carboxymethyl cellulose acetate butyrate having an inherent viscosity of 0.30 to 0.60 dL/g, a degree of substitution per anhydroglucose unit of hydroxyl of 0.10 to 0.70, a degree of substitution per anhydroglucose unit of butyryl of 1.1 to 2.55, and a degree of substitution per anhydroglucose unit of acetyl is 0.1 to 0.9; the liquid vehicle comprises about 20 to 90 weight percent water and about 10 to 80 weight percent of an alkanol having 2 or 3 carbon atoms; about 50 to 80 mole percent of the carboxy groups of the carboxymethyl cellulose acetate butyrate are neutralized with an alkanolamine base having a molecular weight of 45 to 200; and the

sulfonate-containing, linear polyester has an inherent viscosity of about 0.24 to 0.38 dL/g and is comprised of:

(i) diacid monomer residues comprising about 74 to 84 mole percent isophthalic acid residues and about 16 to 26 mole percent 5-sodiosulfo-isophthalic acid residues; and

(ii) diol monomer residues comprising about 45 to 90 mole percent diethylene glycol residues and about 55 to 10 mole percent ethylene glycol residues, 1,4-cyclohexanedimethanol residues or mixtures thereof.

8. A hair grooming composition according to Claim 6 wherein the C_2 – C_4 alkanoate ester of carboxy(C_1 – C_3-alkyl) cellulose component is a carboxymethyl cellulose acetate propionate having an inherent viscosity of 0.30 to 0.60 dL/g, a degree of substitution per anhydroglucose unit of hydroxyl of 0.10 to 0.70, a degree of substitution per anhydroglucose unit of propionyl of 1.1 to 2.55, and a degree of substitution per anhydroglucose unit of acetyl is 0.1 to 0.9; the liquid vehicle comprises about 20 to 90 weight percent water and about 10 to 80 weight percent of an alkanol having 2 or 3 carbon atoms; about 50 to 80 mole percent of the carboxy groups of the carboxymethyl cellulose acetate propionate are neutralized with an alkanolamine base having a molecular weight of 45 to 200; and the sulfonate-containing, linear polyester has an inherent viscosity of about 0.24 to 0.38 dL/g and is comprised of:

(i) diacid monomer residues comprising about 74 to 84 mole percent isophthalic acid residues and about 16 to 26 mole percent 5-sodiosulfo-isophthalic acid residues; and

(ii) diol monomer residues comprising about 45 to 90 mole percent diethylene glycol residues and about 55 to 10 mole percent ethylene glycol residues, 1,4-cyclohexanedimethanol residues or mixtures thereof.

9. A method for grooming or styling hair comprising the steps of:

(i) arranging the hair in a desired manner;

(ii) applying to the hair the hair grooming composition of Claim 1; and

(iii) allowing the applied hair grooming composition to dry to produce a coating of the partially or totally neutralized carboxyalkyl cellulose ester contained in the hair grooming composition on at least a portion of the hair.

10. A method according to Claim 9 wherein step (ii) comprises applying to the hair in a finely-divided form the hair grooming composition of Claim 1.

11. A method according to Claim 9 comprising the steps of:

(a) applying to the hair the hair grooming composition of Claim 1 in the form of a hair gel or mousse;

(b) arranging the hair in a desired manner; and

(c) allowing the applied hair grooming composition to dry to produce a coating of the partially or totally neutralized carboxyalkyl cellulose ester contained in the hair grooming composition on at least a portion of the hair.

12. A method according to Claim 9 wherein step (ii) comprises applying to the hair in a finely-divided form the hair grooming composition of Claim 3.

13. A method according to Claim 9 wherein step (ii) comprises applying to the hair in a finely-divided form the hair grooming composition of Claim 5.